

Fractions and Percentages

1. (Commonly misspelled words) In each of the following sentences, identify the misspelled word.

- a) Four fifths is bigger than two thirds.
- b) France is defided into ninety-six departments.
- c) Mozart was only thirty-five years old wen he died.
- d) One half of me wants to take the job while the otter half doesn't.
- e) A prime number greater than two is neccessarily odd.
- f) The independant variable of the experiment was the height from which the ball was dropped.
- g) Division by zero is not aloud.
- h) The number 10 pales in comparrison to the number 100,000.
- i) Any two points in the plain can be connected by a line.
- j) Watch out bellow!
- k) The scientist acidentaly dropped the beaker.
- l) The hieght of the Eiffel Tower is 324 m.

2. Write each fraction in words.

- | | |
|------------------|-------------------|
| a) $\frac{1}{2}$ | f) $\frac{1}{5}$ |
| b) $\frac{1}{4}$ | g) $\frac{4}{5}$ |
| c) $\frac{3}{4}$ | h) $\frac{2}{5}$ |
| d) $\frac{1}{3}$ | i) $\frac{1}{10}$ |
| e) $\frac{2}{3}$ | j) $\frac{9}{10}$ |

3. Write each fraction in numbers.

- | | |
|-----------------|------------------|
| a) two quarters | e) five sixths |
| b) three fifths | f) five sevenths |
| c) seven tenths | |
| d) five ninths | g) an eighth |

4. If the total cost of 15 tickets is £75, work out the cost of 8 tickets.

5. If the cost of 5 books is £12.50, work out the cost of 8 books.
6. Answer the following questions.
 - a) It's a quarter to six. Melanie is putting something in the oven. It needs to be in the oven for an hour and a half. When will it have finished cooking?
 - b) It's seven o'clock in the evening, and Andrew is starting to write an essay. He writes one page every fifteen minutes. He plans to finish the essay at midnight. How many pages will he have written?
 - c) It's Monday morning, and Sarah is travelling to work. It's twenty kilometres from her home to the office. How far will she have travelled to and from work by the time she gets home on Friday?
7. Use Euclid's algorithm to find the greatest common divisor and least common multiple of
 - a) 270 and 192,
 - b) 323 and 437.
8. Explain how we simplify, add and multiply fractions.
9. Simplify the following fractions.
 - a) $\frac{x^2-8x+12}{2x^2-5x+2}$
 - b) $\frac{16x^2-1}{16x^2-8x+1}$
10. Prove that the following fractions are irreducible.
 - a) $\frac{16}{87}$
 - b) $\frac{7n-5}{3n-2}$ for every $n \in \mathbb{N}$.
11. You have a wet sponge that weighs 200 grams that is 99% water by weight. If you squeeze some of the water out of the sponge such that it is then only 98% water by weight, what would the wet sponge now weigh?
12. Fresh apricots have a moisture content of 80%. When left to dry in the sun they lose 75% of their moisture content. What is the moisture content of the dried apricots?